Fetal Alcohol Syndrome

Definition. Fetal alcohol syndrome (FAS) is a pattern of birth defects caused by maternal alcohol use during pregnancy.[1] Signs of full FAS include a distinctive facial appearance, growth deficiency, and neurological damage.[2] Individuals with FAS have neurological, behavioral, and cognitive deficits that interfere with growth, learning, and social skills. There is now ample evidence that individuals can be affected by prenatal alcohol exposure even without full FAS. The Institute of Medicine describes these effects as alcohol-related neurodevelopmental disorders (ARND) or alcohol-related birth defects (ARBD).[2] Both are commonly referred to as fetal alcohol effects (FAE).

Cause. FAS is caused by a mother's drinking alcoholic beverages during pregnancy.[2] FAS is 100 percent preventable if pregnant women do not drink.

Discovery. The pattern of malformations characterizing FAS was first identified in France in 1968.[3] In 1973, the term FAS was coined.[4]

Harm. Alcohol produces by far the most serious neurobehavioral effects in the fetus of all substances used, including heroin, cocaine, and marijuana.[2]

Incidence. Estimates for FAS vary between 0.5 and 3 per 1,000 births in the United States. Some communities, e.g., American Indians and Alaska Natives, have rates 33 times higher than the general population.[2] Thus, 2,000 to 12,000 of the estimated 4 million children born in the United States each year will have FAS.[5] The National Institute on Alcohol Abuse and Alcoholism estimates that FAE occurs three times more often than full FAS.

Economic costs. Costs associated with FAS have been estimated to range from $1.4 million[6] to $5 million per affected person, excluding the cost of incarceration.[7]

Awareness. Although recent research shows a fairly high level of general awareness of FAS, this knowledge is not always accurate. For example, in a 1995 study, 72 percent of young adults had heard of FAS. However, one-third incorrectly reported that it described an infant born addicted to alcohol and that the syndrome could be inherited and cured.[8]

Risk behavior. A recent national survey showed that more than 12 percent of women age 15 – 44 drank while pregnant.[9] Binge drinking (five or more drinks on any one occasion) and frequent drinking (seven or more drinks per week or five or more on any one occasion) among pregnant women increased fourfold between 1991 and 1995.[10] The most recent statistics show minimal decreases between 1995 and 1999, with both remaining around 3 percent.[11]

The Center for Substance Abuse Prevention

The Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA is the Federal agency charged with improving the quality and availability of prevention, treatment, and rehabilitative services to reduce illness, death, disability, and cost to society resulting from substance abuse and mental illness. SAMHSA works in partnership with States, communities, and private organizations to assist individuals and address community risk factors.

The mission of the Center for Substance Abuse Prevention (CSAP) is to bring effective prevention to every community. CSAP has two primary strategies to address FAS: (1) identify, support, and promote effective substance abuse prevention practices; and (2) build capacity of States, communities, and other groups to apply such practices effectively. CSAP's greatest role in the prevention and treatment of FAS is its administration of the FAS Center for Excellence.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Prevention
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The FAS Center for Excellence

The Children's Health Act of 2000, Sec. 519D (42 USC 290bb-25d) authorized the FAS Center for Excellence to:

1. Study adaptations of innovative clinical interventions and service delivery improvement strategies for children and adults with FAS or ARBD and their families.
2. Identify communities with exemplary comprehensive systems of care for such individuals so that they can provide technical assistance to other communities attempting to set up such systems of care.
3. Provide technical assistance to communities without comprehensive systems of care.
4. Provide training to community leaders, mental health and substance abuse professionals, families, law enforcement personnel, judges, health professionals, persons working in financial assistance programs, social service personnel, child welfare professionals, and other service providers on the implications of FAS and ARBD, early identification, and referral for such conditions.
5. Develop innovative techniques for preventing alcohol use by women in childbearing years.
6. Perform other functions, to the extent authorized by the Secretary after consideration of recommendations made by the National Task Force on Fetal Alcohol Syndrome.

Center for Excellence—Products, Resources, and Services

Beginning in 2002, the Center for Excellence is making the following available:

- A comprehensive database on FAS resources and research
- A series of regional town hall meetings for service providers and parents/caregivers of persons with FAS
- An FAS Web site and toll-free information line
- Training and technical assistance to organizations regarding successful FAS prevention and intervention activities
- Technical assistance, training, strategic and operational advice, and coordination among the CSAP-funded FAS prevention projects

Center for Excellence—Contact Information

Web site: http://fascenter.samhsa.gov

Mailing Address:

1700 Research Boulevard, Suite 400
Rockville, MD 20850

References

1 U.S. Department of Health and Human Services. (2000). *10th Special Report to the U.S. Congress on Alcohol and Health.* Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism.

2 Stratton, K., Howe, C., and Battaglia, F., eds. (1996). *Fetal Alcohol Syndrome: Diagnosis, Epidemiology, Prevention, and Treatment.* Institute of Medicine. Washington DC: National Academy Press.

3 Lemoine, P., et al. (1968). *Les enfants de parents alcooliques: Anomalies observées à propos de 127 cas.* Quest Medical 21:476-482.

4 Jones, K.L., and Smith, D.W. (1973). Recognition of the fetal alcohol syndrome in early infancy. *Lancet,* 2:999-1001.

5 Streissguth, A. (2001). *Fetal Alcohol Syndrome: A Guide for Families and Communities.* Baltimore: Paul H. Brookes Publishing Co.

6 Streissguth, A.P., et al. (1991). Fetal alcohol syndrome in adolescents and adults. *Journal of the American Medical Association* 265(15):1961-1967. The estimated lifetime cost of $1.4 million does not include the cost of mental health services or that FAS individuals would be unable to be at least partially productive in the workplace.

7 Kellerman, C. and Kellerman, T. (1999). *The Five Million Dollar Baby: The Economics of FAS.* (http://come-over.to/FAS/EcoonomicsFAS.htm on 04/04/02). The $5 million estimates includes actual and anticipated costs for medical and dental care, foster and residential care, special education, supported employment, and social security income. This estimate does not include the cost of incarceration, the lost salary of the mother/caretaker, the subsequent impact on the local economy, or the poor quality of life of the individual with FAS.

8 MacKinnon, D.P., Williams-Avery, R.M., and Pentz, M.A. (1995). Youth beliefs and knowledge about the risks of drinking pregnant. *Public Health Reports,* 110:754-763.

9 Office of Applied Studies. (2001). *Summary of Findings from the 2000 National Household Survey on Drug Abuse.* NHSDA Series H-13, DHHS Publication No. (SMA) 01-3549. Rockville, MD: Substance Abuse and Mental Health Services Administration.

10 Alcohol consumption among pregnant and childbearing-aged women—United States, 1991 and 1995. (1997). *Morbidity and Mortality Weekly Report,* 46(16):346-350.

11 Alcohol use among women of childbearing age—United States, 1991—1999. (2002). *Morbidity and Mortality Weekly Report,* 51(13):273-276.

CSAP Center for Substance Abuse Prevention
SAMHSA
Substance Abuse and Mental Health Services Administration

If you're pregnant, don't drink. If you drink, don't get pregnant.